

October 17, 2023



Lightbridge Launches Engineering Study to Assess Lightbridge Fuel for Use in CANDU Reactors

Engages Institutul de Cercetări Nucleare Pitești, a subsidiary of Regia Autonomia Tehnologii Pentru Energia Nucleară (RATEN ICN) in Romania

PITEȘTI, Romania and RESTON, Va., Oct. 17, 2023 (GLOBE NEWSWIRE) -- [Lightbridge Corporation](#) (Nasdaq: LTBR), an advanced nuclear fuel technology company, is pleased to announce it has engaged Institutul de Cercetări Nucleare Pitești, a subsidiary of Regia Autonomia Tehnologii pentru Energia Nucleară (RATEN ICN) to perform an engineering study to assess the compatibility and suitability of Lightbridge Fuel™ for use in CANDU reactors. This assessment will cover key areas including mechanical design, neutronics analysis, and thermal and thermal-hydraulic evaluations. The findings from the engineering study will play an important role in guiding future economic evaluations and navigating potential regulatory licensing-related issues.

What are CANDU Reactors?

Canada Deuterium Uranium (CANDU) reactors, initially designed in Canada during the 1960s, use natural-uranium fuel and heavy water as both a moderator and coolant. Unique in their design, they can be refueled while operating at full power. This contrasts with US reactors that require shutdown during refueling. CANDU is the standard for Canadian nuclear power and is also used in Argentina, China, India, Pakistan, Romania, and South Korea.

Daniela Diaconu, Scientific Deputy Director of Institutul de Cercetări Nucleare Pitești, commented, "We are pleased to collaborate with Lightbridge on this engineering study to investigate the advantages of using Lightbridge's innovative nuclear fuel in CANDU reactors. This engineering study is in line with our mission of supporting the development of technologies that ensure national scientific and technical support in the field of nuclear power and contributes to sustaining international cooperation."

Seth Grae, President & Chief Executive Officer of Lightbridge Corporation, commented, "Today's announcement is an important step for Lightbridge. This engineering study will help us assess the viability of using Lightbridge Fuel in a CANDU reactor, which will help guide our commercialization pathway in determining the types of reactors that we prioritize. The distinctive design of CANDU reactors, such as the smaller dimensions of CANDU fuel rods and shorter irradiation time of the fuel in the core as well as their unique refueling process highlight their potential appeal. Positive confirmation from this engineering study potentially will provide us with the opportunity to expedite our commercialization timelines."

About RATEN ICN Pitești

RATEN ICN Pitești's mission is to provide scientific and technological support for the national nuclear energy program, the vital component in ensuring sustainable, clean and

safe electricity for the citizens of Romania. The nuclear energy program in Romania provides for the safe and competitive operation of Units 1 and 2 at Cernavoda, the refurbishment of Unit 1, the completion of Units 3 and 4, the construction of a new nuclear power plant based on Small Modular Reactors (SMRs), the medium and long-term promotion of advanced IV generation reactors, including construction of a LFR reactor demonstrator (ALFRED), safe disposal of spent fuel and radioactive waste. The institute ensures the operation, development, and use of the necessary infrastructure for the development of research and development programs, the education and training of specialists, as well as sustained international cooperation, as essential elements for a sustainable nuclear energy sector. RATEN ICN also promotes the development and application of nuclear technologies in medicine, industry or agriculture, adding an important contribution to increasing the standard of living for the benefit of citizens.

About Lightbridge Corporation

Lightbridge Corporation (NASDAQ: LTBR) is focused on developing advanced nuclear fuel technology essential for delivering abundant, zero-emission, clean energy and providing energy security to the world. The Company is developing Lightbridge Fuel™, a proprietary next-generation nuclear fuel technology for existing light water reactors and pressurized heavy water reactors, significantly enhancing reactor safety, economics, and proliferation resistance. The Company is also developing Lightbridge Fuel for new SMRs to bring the same benefits plus load-following with renewables on a zero-carbon electric grid.

Lightbridge has entered into two long-term framework agreements with Battelle Energy Alliance, LLC, DOE's operating contractor for Idaho National Laboratory (INL), the United States' lead nuclear energy research and development laboratory. DOE's Gateway for Accelerated Innovation in Nuclear (GAIN) program has twice awarded Lightbridge to support the development of Lightbridge Fuel over the past several years. Lightbridge is participating in two university-led studies through the DOE Nuclear Energy University Program at Massachusetts Institute of Technology and Texas A&M University. An extensive worldwide patent portfolio backs Lightbridge's innovative fuel technology. Lightbridge is included in the Russell Microcap® Index. For more information, please visit www.ltbridge.com.

To receive Lightbridge Corporation updates via e-mail, subscribe at <https://www.ltbridge.com/investors/news-events/email-alerts>

Lightbridge is on X (formerly Twitter). Sign up to follow @LightbridgeCorp at <http://twitter.com/lightbridgecorp>.

Lightbridge is on Threads @lightbridgecorp.

Lightbridge is on We Don't Have Time. Join the dialogue at <https://app.wedonthavetime.org/profile/Lightbridge>

For an introductory video on Lightbridge, please visit www.ltbridge.com or click [here](#) to watch the video.

Forward Looking Statements

With the exception of historical matters, the matters discussed herein are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding the anticipated benefits of Lightbridge Fuel™ in SMRs and the outcomes of the study. These statements are based on current expectations on the date of this news release and involve a number of risks and uncertainties that may cause actual

results to differ significantly from such estimates. The risks include, but are not limited to: the Company's ability to commercialize its nuclear fuel technology; the degree of market adoption of the Company's product and service offerings; the Company's ability to fund general corporate overhead and outside research and development costs; market competition; our ability to attract and retain qualified employees; dependence on strategic partners; demand for fuel for nuclear reactors; the Company's ability to manage its business effectively in a rapidly evolving market; the availability of nuclear test reactors and the risks associated with unexpected changes in the Company's fuel development timeline; the increased costs associated with metallization of our nuclear fuel; public perception of nuclear energy generally; changes in the political environment; risks associated with war in Europe; changes in the laws, rules and regulations governing the Company's business; development and utilization of, and challenges to, our intellectual property; risks associated with potential shareholder activism; potential and contingent liabilities; as well as other factors described in Lightbridge's filings with the Securities and Exchange Commission. Lightbridge does not assume any obligation to update or revise any such forward-looking statements, whether as the result of new developments or otherwise, except as required by law. Readers are cautioned not to put undue reliance on forward-looking statements.

A further description of risks and uncertainties can be found in Lightbridge's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, and in its other filings with the Securities and Exchange Commission, including in the sections thereof captioned "Risk Factors" and "Forward-Looking Statements", all of which are available at <http://www.sec.gov/> and www.ltbridge.com.

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A photo accompanying this announcement is available at
<https://www.globenewswire.com/NewsRoom/AttachmentNg/e78ec63b-6b39-4a99-8d16-9b452423a770>



Signing Ceremony



Dr.Constantin Paunoiu, Director of Institutul de Cercetări Nucleare Pitești, and Dr. Andrey Mushakov, Lightbridge's Executive Vice President, Nuclear Operations (October 16, 2023)

Source: Lightbridge Corporation